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EXAMINER

DANIEL JR, WILLIE J

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,126

Applicant(s)

LEMLEY, BRAD

Examiner

Willie J. Daniel, Jr.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/18/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Specification

1. The objection to the Abstract is withdrawn.

Claim Objections

2. The objection to the Claim 6 is withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 3, 4, 6, 7, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by **Hao (US 6,437,709)**.

Regarding **Claim 1**, Hao discloses a mobile handset keypad comprising an array of keys positioned on a surface of a mobile housing for user interface with the mobile (see abstract; col. 5, line 53 - col. 6, line 24; col. 7, lines 4-11; Figs. 4-15), said array of keys comprising:

at least one alphanumeric key (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the keyboard illustrates having an alphanumeric key;

at least one integral navigation and alphanumeric key (see col. 5, line 53 - col. 6, line 24; Figs. 4-15); and

a control key which reads on the claimed “toggle key” for toggling between an alphanumeric and a navigation mode (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key is a multifunction key to change states between modes.

Regarding **Claim 3**, Hao discloses wherein said toggle key manually toggles between an alphanumeric and a navigation mode when operated by the user (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key is a multifunction key to change functions between modes.

Regarding **Claim 4**, Hao discloses wherein said at least one integral navigation and alphanumeric key (see abstract; col. 5, line 53 - col. 6, line 24; Figs. 4-15) comprises:

a first integral navigation and alphanumeric key comprising an up navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “2” provides up navigation;

a second integral navigation and alphanumeric key comprising a down navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “8” provides down navigation;

a third integral navigation and alphanumeric key comprising a right navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “6” provides right navigation;

a fourth integral navigation and alphanumeric key comprising a left navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “4” provides left navigation.

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Regarding **Claim 6**, Hao discloses a mobile handset (see abstract; col. 5, line 53 - col. 6, line 24; col. 7, lines 4-11; Figs. 4-15) comprising:

a microprocessor and menu display including software routines for creating and displaying a menu (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the display shows characters, numbers, and/or menu according to the action keys in which the microprocessor would be inherent process the function;

a housing including a front face with openings for touch keys and said display and containing said microprocessor (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the housing that has keys and a display which encloses the microprocessor that is inherent to provide the functions of the phone;

a plurality of switches within said housing (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the switches would be inherent to provide the operation of the each key when pressed or actuated.

a keypad within said housing comprising an array of keys projecting through the openings in the front face of said housing, each interacting with one corresponding switch (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the array of keys correspond to a keypad within the housing that interact with switches that are inherent;

one of said switches being a toggle switch for controlling through a corresponding toggle key the mode of operation of a selected number of said other keys and corresponding switches (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key has a switch which is inherent to provide the function of the key;

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said select number of keys and corresponding switches comprising combined navigation and alphanumeric keys, said alphanumeric keys and corresponding switches providing a telephone dialing and menu display input function when in an alphanumeric mode of operation and alternatively a menu navigation control mode of operation (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the keys and switches would be inherent to change between the operation of the phone for dialing, navigating through menus, or entering data; and

means for differentiating said combined alphanumeric and navigation keys from other keys (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key would be used to provide the functions of alphanumeric and navigation mode in which the keys without navigation would be inoperable when providing navigation functions.

Regarding **Claim 7**, Hao discloses wherein said differentiating means comprises graphical elements on the front face of the housing (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the graphical elements are displayed on the keys that are on the front face of the housing.

Regarding **Claim 14**, Hao discloses additionally comprising a dual function key and associated switch for sending stored dialing information and entering user input when in alphanumeric mode and alternatively selecting menu options when in navigation control mode (see col. 4, lines 21-37; Figs. 4-15), where the "enter key" symbol (i.e., "SEND" key of conventional mobile - see Figs. 2-3 for symbol) provides the function of operation for sending dialing information from a directory or phone list and entering text while in alphanumeric mode and selecting from menu options while in navigation mode for phone operation in which the associated switch and operations would be inherent.

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Regarding **Claim 15**, Hao discloses additionally comprising a dual function key and associated switch for ending a telephone call when in alphanumeric mode and alternatively moving up in the menu hierarchy when in navigation control mode (see col. 6, line 20; Figs. 4-15), where the “clear key” symbol (i.e., “C” key of conventional mobile - see Figs. 2-3 for symbol) provides the function of operation for ending a telephone call while in alphanumeric mode and navigating or moving up to a higher menu while in navigation mode for phone operation in which the associated switch would be inherent.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hao (US 6,437,709)** in view **Kraft et al. (hereinafter Kraft) (US 6,463,278 B2)**.

Regarding **Claim 2**, Hao teaches of manually toggling between alphanumeric and navigation mode by using the control key which reads on the claimed “toggle key” (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key is a multifunction key to change key functions between modes of phone operation. Hao fails to disclose automatically changing or toggling between modes. However, the examiner maintains that automatically changing or toggling between modes was well known in the art, as taught by Kraft.

In the same field of endeavor, Kraft teaches of automatically changing or toggling between modes (see abstract; col. 1, lines 39-57; col. 6, lines 17-24, Fig. 2), where the phone automatically changes modes based on the detected parameter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Kraft to have the mobile phone automatically changing or toggling between modes.

The advantage of combining the teachings of Hao and Kraft is for the CPU of the mobile to automatically detect the control parameters of the phone without having the user to manually change the operation mode (see Kraft - col. 6, lines 20-27).

Regarding **Claim 5**, Hao teaches of a mobile handset keypad comprising an array of keys positioned on a surface of a mobile housing for user interface with the mobile (see abstract; col. 5, line 53 - col. 6, line 24; col. 7, lines 4-11; Figs. 4-15), said array of keys comprising:

- at least one alphanumeric key (see abstract; col. 5, line 53 - col. 6, line 24; col. 7, lines 4-11; Figs. 4-15);

- a first integral navigation and alphanumeric key comprising an up navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key "2" provides up navigation;

- a second integral navigation and alphanumeric key comprising a down navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key "8" provides down navigation;

- a third integral navigation and alphanumeric key comprising a right navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key "6" provides right navigation;

- a fourth integral navigation and alphanumeric key comprising a left navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key "4" provides left navigation; and

- a toggle key for manually toggling between an alphanumeric and a navigation mode when operated by the user for toggling between said alphanumeric and navigation modes based upon data input during user interface (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key is a multifunction key to change functions between modes. Hao fails

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to disclose automatically changing or toggling between modes. However, the examiner maintains that automatically changing or toggling between modes was well known in the art, as taught by Kraft.

Kraft further teaches of automatically changing or toggling between modes (see abstract; col. 1, lines 39-57; col. 6, lines 17-24, Fig. 2), where the phone automatically changes modes based on the detected parameter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Kraft to have the mobile phone automatically changing or toggling between modes.

The advantage of combining the teachings of Hao and Kraft is for the CPU of the mobile to automatically detect the control parameters of the phone without having the user to manually change the operation mode (see Kraft - col. 6, lines 20-27).

Regarding **Claim 11**, Hao teaches of manually toggling the combined alphanumeric and navigation keys between alphanumeric and navigation mode by using the control key which reads on the claimed "toggle key" (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key is a multifunction key to change key functions into navigation control mode for user data input. Hao fails to disclose automatically changing or toggling between modes. However, the examiner maintains that automatically changing or toggling between modes was well known in the art, as taught by Kraft.

Kraft further teaches of automatically changing or toggling between modes (see abstract; col. 1, lines 39-57; col. 6, lines 17-24, Fig. 2), where the phone sensor automatically changes modes based on the detected parameter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Kraft to have the mobile phone automatically changing or toggling between modes.

The advantage of combining the teachings of Hao and Kraft is for the CPU of the mobile to automatically detect the control parameters of the phone without having the user to manually change the operation mode (see Kraft - col. 6, lines 20-27).

Regarding **Claim 12**, Hao teaches of manually toggling the combined alphanumeric and navigation keys between alphanumeric and navigation mode by using the control key which reads on the claimed "toggle key" (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key is a multifunction key to change key functions into alphanumeric modes of phone operation for user data input. Hao fails to disclose automatically changing or toggling between modes. However, the examiner maintains that automatically changing or toggling between modes was well known in the art, as taught by Kraft.

Kraft further teaches of automatically changing or toggling between modes (see abstract; col. 1, lines 39-57; col. 6, lines 17-24, Fig. 2), where the phone sensor automatically changes modes based on the detected parameter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Kraft to have the mobile phone automatically changing or toggling between modes.

The advantage of combining the teachings of Hao and Kraft is for the CPU of the mobile to automatically detect the control parameters of the phone without having the user to manually change the operation mode (see Kraft - col. 6, lines 20-27).

Regarding **Claim 13**, Hao teaches of manually toggling the combined alphanumeric and navigation keys between alphanumeric and navigation mode by using the control key which reads on the claimed "toggle key" (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key is a multifunction key to change key functions between modes of phone operation. Hao fails to disclose automatically changing or toggling between modes. However, the examiner maintains that automatically changing or toggling between modes was well known in the art, as taught by Kraft.

Kraft further teaches of automatically changing or toggling between modes (see abstract; col. 1, lines 39-57; col. 6, lines 17-24, Fig. 2), where the phone sensor automatically changes modes based on the detected parameter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Kraft to have the mobile phone automatically changing or toggling between modes.

The advantage of combining the teachings of Hao and Kraft is for the CPU of the mobile to automatically detect the control parameters of the phone without having the user to manually change the operation mode (see Kraft - col. 6, lines 20-27).

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Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hao (US 6,437,709)** in view of **Stephenson (US 6,006,118)**.

Regarding **Claim 8**, Hao teaches of a differentiating means that have keys that perform combined alphanumeric and navigation mode of operation (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key changes the function of keys in which keys for navigation are operable when in navigation mode. Hao fails to disclose having a backlighting panel that illuminates the keys. However, the examiner maintains that having a backlighting panel that illuminates the keys was well known in the art, as taught by Stephenson.

In the same field of endeavor, Stephenson teaches of having a lightguide (32) which reads on the claimed "backlighting panel" that illuminates the keys (see abstract; col. 4, lines 6-31; Figs. 2-3), where the lightguide provides light to the keys from the light sources (e.g., LEDs).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Stephenson to have backlighting panel that illuminates the keys.

The advantage of combining the teachings of Hao and Stephenson is to have light directed to each key of a mobile phone (see Stephenson - col. 4, lines 6-9).

Regarding **Claim 9**, Hao teaches of a differentiating means that have keys that perform combined alphanumeric and navigation mode of operation (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key changes the function of keys in which the keys for navigation are operable when in navigation mode. Hao fails to disclose having a housing

surface area illuminated by backlighting panel. However, the examiner maintains that having a housing surface area illuminated by backlighting panel was well known in the art, as taught by Stephenson.

Stephenson further teaches of having a housing surface area illuminated by backlighting panel (32) (see abstract; col. 4, lines 6-31; Figs. 2-3), where the keys of the keypad (18) are part of the housing surface area that are illuminated by the light sources (e.g., LEDs).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Stephenson to have a housing surface area illuminated by backlighting panel.

The advantage of combining the teachings of Hao and Stephenson is to have light directed to each key of a mobile phone (see Stephenson - col. 4, lines 6-9).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hao (US 6,437,709)** in view **Cushman et al.** (hereinafter Cushman) (**US 6,125,287**).

Regarding **Claim 10**, Hao teaches of having differentiating means for the mode of operation (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key changes the phone between the modes of operation. Hao fails to disclose having an icon on the display to identify the mode. However, the examiner maintains that having an icon on the display to identify the mode was well known in the art, as taught by Cushman.

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In the same field of endeavor, Cushman teaches of having an icon on the display to identify the mode (see col. 3, lines 10-18; Fig. 1), where the icon which corresponds to a particular mode of operation or function is displayed on the screen.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Cushman to have a housing surface area illuminated by backlighting panel.

The advantage of combining the teachings of Hao and Cushman is to allow the functions for operating the phone to be displayed (see Cushman - col. 3, lines 14-22).

Response to Arguments

5. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. **Park et al. (US 2001/0012790 A1)** discloses a *Key In Method In a Mobile Telecommunication Terminal*.
- b. **Shibata (EP 0895418 A2)** discloses an *Image-area Extracting Method For Visual Telephone*.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (703) 305-8636. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJD,JR/wjd,jr
08 March 2004

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